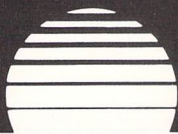


Free Spirit
Software Inc.



ULTRA

DOS

UTILITIES

MODULE I

ULTRA DOS UTILITIES

MODULE I

From



Programming and Instruction Manual by

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<BSD> Software

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I. INTRODUCTION

The Commodore Amiga is the most sophisticated micro-computer in its price range available on the market today. Any computer with the power of the Amiga must have an equally sophisticated disk operating system, and the Amiga is no exception. Amiga provides two methods of manipulating the file system. Workbench, the default startup screen, and the CLI, or Command Line Interface. Workbench provides a friendly, easy to use environment for the most simple of disk operations, and the CLI provides a powerful and sophisticated interface to the Disk Operating System. However, the CLI is defined as a programmers interface to the Amiga, and as such it can be a very frustrating environment for the non-programmer user. Ultra DOS Utilities provides a Workbench-like environment of gadgets and requesters, but allows the non-programmer to fully utilize the power of AmigaDOS(tm).

Additionally, Ultra DOS Utilities incorporates many features specifically engineered for the Hard Disk Drive user, like file path displays up to 250 characters long (roughly equivalent to directories nested 16 levels deep), adjustable copy buffer size, batch file processing across drive or partition boundaries, and many more refinements that make life with a hard drive much easier.

II. SYSTEM REQUIREMENTS

Ultra DOS Utilities requires an Amiga (500, 1000, 2000) with 512K memory minimum using Workbench/Kickstart Version 1.2 or beyond. As Ultra DOS Utilities is essentially a file handler system, it will be much more useful the more peripherals and memory you have. Currently, there is no known limit to the number of track disk devices and other types of peripherals that Ultra DOS Utilities will address.

III. GETTING STARTED

Ultra DOS Utilities contains some very powerful DOS routines that have the potential to destroy your data files. This program is not a word processor or art package, it is a DOS utility system. Mistakes could be costly! You are highly encouraged to read the entire instruction manual prior to beginning file operations with Ultra DOS Utilities. Also, any errata or addendum to the instruction manual will be available in a README file on your program disk. Check these files for new information.

When you are ready to boot Ultra DOS Utilities, simply insert the program disk in the internal drive (DFO:) and press <CONTROL> <AMIGA> <AMIGA> to warm reset the computer, or boot the computer with the Ultra DOS Utilities disk in the internal drive. Ultra DOS Utilities is provided on a bootable Workbench 1.2 disk for this purpose. If you wish to run Ultra DOS Utilities without resetting your computer, double click on the FS disk icon (to open the Disk) then double click on the Ultra DOS Utilities icon. If you wish to operate Ultra DOS Utilities from your Hard Disk Drive, see appendix A, "Hard Drive Installation" for more information.

A. Directory Requirements:

Regardless of how Ultra DOS is started, a COMMAND “C” directory of AmigaDOS(tm) commands must be available. If you boot from the FS program disk, it already contains a ‘C’ directory. If you start Ultra DOS AFTER booting from another program disk, a ‘C’ directory must be available. Specifically, the following commands MUST be present for Ultra DOS to function correctly:

- a. RUN
- b. ED
- c. NewCLI

IV. AmigaDOS(tm) FILING SYSTEM

Definitions:

Volume Name – The unique DOS name of an *actual or virtual* disk.

Device Name – The unique name given to *actual or virtual* devices connected to the Amiga. These can include RAM: for Ram Disk, SER: for serial port, PAR: for parallel port, PRT: for printer device, DFO: for the internal drive, etc.

Path – The path, or trail that leads to a particular file. The path usually includes a device or volume name, a colon, then a directory name (or Names) separated by a ‘slash’, then the file name.

Example for file ‘addbuffers’ located in the ‘C’ directory of the Workbench disk:
“Workbench 1.2:C/addbuffers”

While this looks straightforward in the above example, for large capacity filing systems with many subdirectories, this convention can become very complex.

Example for a hard disk system:

AmigaHD:WorkArt/Hi-Resolution/StillLifes/FruitPictures/MyApplePicture

The above example uses subdirectories nested 4 deep. This approach provides for well-separated data, but it quickly becomes a burden trying to locate a particular file.

Protection – This refers to the 4 types of protection provided for files and directories in AmigaDOS(tm). Note that the current release (1.2) of AmigaDOS(tm) only checks for DELETE protection, even though the other protection status’ can actually be changed, AmigaDOS(tm) does no checking for them. This means that a READ protected file can be read, etc. Hopefully, future releases of operating system will correct this.

These are:

- 1) **Delete Protection** – Files or directories marked with this type of protection cannot be deleted OR OVERWRITTEN by a file of the same name.
- 2) **Write Protection** – Files marked with this protection cannot be written to, overwritten, or appended. (not currently implemented)
- 3) **Read Protection** – Files marked with this protection cannot be read. (not currently implemented)
- 4) **Execute Protection** – Files marked with this protection cannot be executed. (not implemented)

IFF Format – This refers to a standard file format that allows various application programs to share data files created with different programs.

Ultra DOS Definitions:

Gadgets – This refers to the control panel buttons on the main display and the function windows. Function screens ‘pop up’ when a particular control panel gadget is selected.

Gadget Selection – This refers to moving the mouse pointer to a displayed name or gadget and pressing the LEFT mouse button.

String Gadgets – These are the Intuition(tm) text entry boxes. To enter a string of characters, click in the box first.

V. THE ULTRA DOS CONTROL PANEL

Stat OK			Select Request <<==	SELECT Volume Device	SET Copy Buffer	STATUS Batch: OFF
Quit	(c)	NewCli				
Path Workbench 1.3:C			FUNCTIONS	Path AmigaHD:Art/Workart/Pi		
File Addbuffers				File MyApplePicture		
Parent (/) Root (:) ?			Find	Parent (/) Root (:) ?		
Addbuffers Avail Ed Edit Endcli Endif Failat If			Copy	Banana.Pic Amiga.Pic BirdFlying.pic (Dir) Static_Art (Dir) Animation (Dir) Deluxe_Pics (Dir) Ultra_Art		
			Delete			
			MakeDir			
			Format			
			DEVICE			
			Source			
			<<==			
			Target			
			==>>			

The control panel shown consists of three basic sections.

1. The LEFT and RIGHT file display requesters.
2. The Environment control section (located above the file display requesters).
3. The Functions section (located between the file requesters).

VI. THE FILE DISPLAY REQUESTERS

The file requesters, outlined in the display above, provide all the tools needed to quickly move around even the most complex disk directory. Each requester operates independently of the other, and they can operate simultaneously to display different data.

Each requester consists of the following components:

A. PATH – text entry box that shows a volume or device name, and any subdirectories. This gadget displays 32 characters. If your path name is longer than that, click on the text cursor right to view the remaining text (250 characters maximum) Paths are created and displayed automatically, or you can type directly into the box. Clicking in this box and pressing RETURN will cause the directory of the displayed volume/directory to be read.

B. FILE – Displays name of selected file, or you can enter a file name directly into the box. Pressing RETURN will invoke the INFO screen for the file displayed.

C. PARENT DIR (/) – Clicking on this gadget will move the path displayed in the PATH Gadget to the next higher level directory. Ultra DOS will automatically read and display the files and directories contained in the new path.

From the example above, clicking on the PARENT DIR gadget would change this:

PATH AmigaHD:WorkArt/HiResolution/StillLifes/FruitPictures
FILE MyApplePicture

To this:

PATH AmigaHD:WorkArt/HiResolution/StillLifes
FILE

The current directory for this requester is now 'FruitPictures'. Note that no file name will be displayed until you select one from the display area, and the display area will now contain the contents of the StillLifes Directory.

D. ROOT DIR (:) – Clicking on this gadget will remove all subdirectories from the path. From the above example, clicking on ROOT would produce this:

PATH AmigaHD:
FILE

The contents of the root directory will now be displayed in the display area. The Current directory for this requester is now the ROOT directory.

E. The '?' (Info) Gadget – Clicking on this gadget will produce The File Information Screen. This screen will show all the pertinent information on the file displayed in the FILE text entry box. If no file is displayed in the FILE text box, the Information Screen will display information for the current directory.

F. File Display area – Any files or subdirectories in the current directory (as displayed in the PATH text entry box) are shown here. Subdirectories have the word '(Dir)' prepended to them. Clicking on a filename causes that name to display in the FILE text box. Clicking on a 'directory' causes that name to be added to the existing path displayed in the PATH text box and the new directory is read and displayed.

G. File Scroll gadget – Moving this gadget up or down causes file and subdirectory names to scroll up or down. In this manner you can quickly view the contents of even the largest directories. Note that you must have at least 11 files or subdirectory names for any scrolling to occur.

VII. Environmental Controls

The Environmental Control section provides the controls necessary to activate file display requesters, set copy buffer size, display and select volumes and devices, provides feedback on all operations and set or clear BATCH mode. Each feature is described below.

A. SELECT REQUESTer – This gadget selects which requester (meaning the device or volume displayed in that requester) is active. The active requester is the requester that certain functions act on, like SET VOLUME DEVICE, BATCH file section and the FUNCTIONS described below. Startup setting for this is LEFT REQUESTER SELECTED, which is displayed in the STATUS window on startup.

B. SET VOLUME / DEVICE – Clicking on this gadget ‘pops’ up a window that shows two columns of information, left column is a list of available Volumes (Volumes logged in with AmigaDOS(tm), not necessarily volumes currently inserted in a drive) and a list of available devices. There is no relationship between the two lists. They are displayed in the order they were ‘logged in’ with the operating system. Selecting one of the displayed names causes that volume or device to appear in the PATH text box of the requester selected with the SELECT REQUESTer gadget.

The SELECT VOLUME window pops up automatically any time a disk is inserted in a drive.

C. SET COPY BUFFER – This gadget provides you with the ability to predetermine the size of the memory buffer used to store the files you will be copying. Selecting this gadget causes the SET MEMORY requester to pop up. This requester displays the following:

1. Copy Buffer – This is the size of the existing copy buffer.
Ultra DOS Utilities allocates 20K on startup.
2. Chip Memory
3. Fast Memory
4. Total Free – This represents the total free memory available.

Clicking on the INCREASE gadget will allocate an additional increment of memory. The size of the increment depends on the size of the buffer. The bigger the current buffer, the larger the increment.

For best results, set the memory buffer to a size LARGER than the largest file you will be copying. For typical use, a buffer size of 100K to 200K is adequate.

D. STATUS BATCH – (default OFF). The BATCH control turns BATCH mode on or off. Batch mode is used for ‘point and click’ selections of files for copying or deleting. When in BATCH mode, the FILE text boxes for both file display requesters are turned off.

BATCH Selection rules. In order for files to be batch selected in a file display requester, that display requester must have been selected with the **SELECT REQUESTer** control. Files selected in BATCH mode turn red when selected. Clicking on a file when it is red 'de-selects' the file and it turns black. Files can be batch selected from across directories or volumes. By toggling active requesters from left to right, you can have batch selected files in both file display requesters. Directories cannot be BATCH selected.

E. NEWCLI – The NEWCLI gadget spawns a CLI process that is identical in all respects to a Workbench(tm) CLI. For the CLI novice, to exit type **ENDCLI** then press **RETURN**.

F. Using the Control Panel, a short tutorial. First, we will look at the directory of the SYStem disk. The SYSTEM disk is where the operating system expects to find necessary files. Unless an assignment has been made to another disk (possibly a hard disk) the SYStem disk will be the disk used to boot the Amiga.

As stated, the active file display requester is the left requester on startup. The fault path is SYS:. To view the directory, simply click on the **ROOT (:)** gadget (or the **PARENT (/)** gadget).

To view a subdirectory, simply click on it's name. To move out to your last directory, click on **PARENT**. To view all the files in the display area, click on the red scroll gadget, and with the left mouse button held down, move the gadget up and down. The larger the directory, the smoother the scrolling action. It's that simple!

Now click on the **SELECT REQUESTer** gadget. Note how the arrow below the text now points to the right. The right requester is now active.

Click on the **SELECT VOLUME DEVICE** gadget. Select a displayed Volume or device name and that name will appear in the **PATH** text box of the right requester and that device's directory will display in the right requester display area. You can now move through both Volume's directories simultaneously. As stated earlier, the file display requesters operate independently of each other.

In either requester, click on a filename and that name will appear in the **FILE** text box. Now click on the **'?' (info)** gadget and we will discuss the features of this screen.

G. The INFO Screen – The INFO screen can be invoked from any of the function screens as well as the **'?'** gadget of the file display requester.

The INFO screen controls and display will be discussed starting from the top of the display.

1. **NAME** – This is the **FULL PATH NAME** that was displayed in the **PATH** and **FILE** text boxes (or any of the function screens **NAME** display that you invoked **INFO** from – 250 Characters max). As with the **PATH** display of the file display requester, it is possible that your path name will be longer than what can be displayed. To view it all, click in the text box and move the cursor to the right. You can change a file's name by simply clicking in the text box and modifying the displayed name. Press **RETURN** to effect the change. You can also modify the file path by editing a directory name. In order for this to work, the new directory must already exist. Note that after pressing **RETURN** the **STATus** window in the center of the screen will let you know if the operation was successful or not.
2. **DATE** – This is the creation date or the date of last update the file, directory or volume displayed in the **NAME** gadget. Whatever is the **last object** in the **NAME** display is what the date will pertain to.
3. **SIZE** – This shows file size for **FILES** only. Size is in disk blocks and bytes.
4. **TYPE** – This will be either **Dev/Dir** for device or directory, or **File** if the displayed object is a file.
5. **PROTECTION** – **R, W, E, D**. These four gadgets represent the current protection status of the file or directory displayed (whichever is the **LAST** object in the **NAME** gadget). Clicking on any of the four gadgets will change that particular protection status. As mentioned earlier, **AmigaDOS(tm)** up to release 1.2 checks for only **DELETE** protection. The **STATus** display will notify you of the success or failure of the protection change.
6. **COMMeNT** – **AmigaDOS(tm)** files or directories may have an 80 character comment attached to them. To attach a comment to a file or directory, simply click in the **COMM** gadget, enter your comment and press **RETURN**. To remove a comment, click in the box, backspace over or delete the comment and press **RETURN**.
7. **STATus** – This display gives the most complete error messages available with **Ultra DOS Utilities**. If an error occurs, the display will include first a sentence telling you what operation failed such as 'File Rename Failed', then the **AmigaDOS(tm)** error number, then a description of the error number. An example:
Protection change Failed: I/O Error 202 'Object In Use'
8. **FILE CONTROL** –
 - a. **DELETE OBJECT** – Use to delete an individual file or directory.
 - b. **EDIT ASCII FILE** – This option invokes the **AmigaDOS(tm)** **ED** full screen editor which in turn will display whatever file is shown in the **NAME** display. Note that only vanilla **ASCII** files will display. If a file contains **ANY** binary data **ED** will not work. Any resource dealing with **AmigaDOS(tm)** will contain a full description of the available commands. A brief review of a few commands is provided below.

Ultra DOS Utilities

Typical cursor up, down, left, or right are supported.

ConTRoL B – <CTRL> and ; delete line

RETURN – start new line

ESCAPE, then Q – <ESC> then <X>; write out the displayed file, then exit.

ESCAPE, then SA/newfilename – write out the data to a new file. Note that you can use the ESCAPE, SA/ option to output a text file to your printer, like this:

ESCAPE then SA/PRT: RETURN

c. VIEW IFF FILE – This option will display an IFF picture file of any resolution, including HAM images. Each file will display for 5 seconds, then control is returned to the INFO screen. Note that HAM images are shown with 32 colors only, to conserve memory.

9. VOLUME INFO – This section of the INFO screen displays pertinent information on the parent Volume as shown in the NAME gadget.

VIII. THE ULTRA DOS UTILITIES FUNCTIONS

Each function shown in the control panel FUNCTION section (located between the file display requesters) will be discussed in a tutorial format.

A. SOURCE & TARGET – These gadgets work together, and determine which file display requester (meaning the volume or directory displayed in the PATH text box of that requester) will be the source and target for all copy operations. Clicking on either gadget changes both gadgets.

B. FIND – This function will search all directories and subdirectories for a specified file name. The search begins by taking the path from the active file display requester and showing it in the PATH box of the LOCATE A FILE screen. Enter a file name or wild card to search. (See appendix B for a description of wild card search patterns).

Try this:

Assuming that a copy of your Ultra DOS Utilities disk is in your internal drive, select SELECT VOLUME/DEVICE, which pops up a screen showing all available volumes and devices. Select Ultra DOS:. Ultra DOS: will now be displayed in the PATH box of whichever file display requester was active. Now select FIND from the functions section. The FIND screen will pop up, showing Ultra DOS: in it's path text box. Enter Epson in the NAME box. (We are going to try to find the Epson printer driver). Select the SEARCH gadget and the STATUS display will show 'Searching'. As each subdirectory is searched, that subdirectory name will be displayed in the PATH box. When the PATH shows Ultra DOS:devs/printers, the name 'Epson' will appear in the status display. The file was found. All pertinent information can be found on the displayed file by selecting the INFO gadget.

You can manually type in the path of your choice also. Try this:

Click in the PATH box and erase everything but the word Ultra DOS:. Now click in the NAME box and change the file name from Epson to **epson** (lower case 'e'). Select SEARCH again. After a few moments, the STATUS display will show 'No Further Entries'/ The file was NOT found. This illuminates the fact that all search routines in Ultra DOS Utilities are case sensitive. That is, the upper or lower case of the letter is as important as the letter itself.

If you are unsure of what applies to a particular file, use a single match wild card, the '?' symbol. Searching for the file ?pson would have found either Epson or epson.

C. COPY ROUTINES – Ultra DOS Utilities contains two copy routines, BATCH and STANDARD. If Batch mode is on, Batch copy is automatically selected for you.

1. BATCH COPY – The following procedure presumes that you have already made batch file selections and you are now ready to copy them.

- a. Ensure one file display requester is showing the device, volume or directory you wish to copy into the PATH box.
- b. Ensure the TARGET gadget is pointing at the file display requester mentioned above.
- c. Click on the COPY gadget in the Functions section. The first of two screens will pop up. Consider this the ASK screen. It shows the target path, copy buffer size and the number of files to copy. Select BEGIN and the batch copy screen pops up. The batch copy screen consists of the following:

File Name of the file currently being copied

Number of files remaining to copy

Target disk Bytes Free

Copy Status display

The 4 control gadgets, SKIP FILE, OVERWRITE, WARN and CANCEL.

Copying starts as soon as the second screen pops up. Batch copy will look to see if a file of the same name exists and warn you if it does, as long as WARN is turned on. If you do get a File Exists warning, select either OVERWRITE to have the new file replace the old, or SKIP FILE to leave the old file intact and move to the next file. You can abort the copy process by selecting CANCEL. When copying is complete, the Copy screen will close and control reverts to the main control panel. Batch Mode does not automatically turn off. If you wish to delete the source files, you can select DELETE while still in batch mode.

2. STANDARD COPY – The Standard Copy screen is the most complex of all function screens. The screen display and control features will be described first, then a tutorial will be presented for various types of copying.

a. The Screen.

– The PATtern text entry box: you may enter a file name, wildcard search pattern or a combination of the two. See Appendix B for a description of the rules of selection for patten matching.

– D/T Date or Time gadget: You may enter a FUTURE date for those files that have a creation date in the future. When entering dates or times, the conventions described in Appendix B must be followed or an INVALID DATE warning will be shown in the status display. For Time entries, a match will occur only if the file creation date/time is between the time you enter and the current system time. Using the conventions listed in Appendix B, you can have Ultra DOS search an entire volume or device for all the files created (or updated) in the last x amount of time, and only copy those files.

– SORC: The source path as shown in the source file display requester. You can manually enter a source path into this string gadget (press RETURN when done), and, as Ultra DOS searches and copies files and directories, the current source path that Ultra DOS is in will be displayed.

– TARG: The target path as shown on the target file display requester. The same rules apply for the target as the Source gadget mentioned above.

– STATus display: Messages from Ultra DOS will display here, such as 'searching ...', etc., also any errors encountered, and a warning that a target file exists if WARN is turned on.

– COPY FILE: This is the file currently being copied.

– TARG FREE: Bytes Free on target disk.

– COPY FILES gadget: Begins the copy process. Also used to answer the status request 'FILE EXISTS: Overwrite or Skip!'

– SKIP FILE gadget: Used to answer the request mentioned above.

– DIRS: (default ALL) Ultra DOS Utilities looks at each level of subdirectories as a discreet entity. You can specify how many levels deep you want to copy/search. The default ALL means 16 levels deep (Numbered 0 to 15.) The DIRS gadget is a looping gadget. Every time you click on it, it will increment by one, until it says ALL. One more click then sets it to zero. A value of zero means 'search/copy only the existing directory, do not attempt to nest into ANY other directories.' A value of one then means to move into (to search/copy) only one level of subdirectory below the current level. Remember, the current directory level is set by the file display requester prior to selecting the COPY function, or

by manually typing into the SOuRCe or TARGet text entry boxes of the COPY screen.

– **FORMAT:** This gadget invokes the **FORMAT** function screen, to allow you to format a new disk. See **FORMAT** function for details.

– **WARN:** (default ON) This works exactly as the **BATCH COPY WARN** feature.

– **AUTOFORMAT:** (default ON) This feature, when ON, causes Ultra DOS to ensure the target disk has adequate **BLOCKS FREE** on it prior to beginning the copy of a particular file. In the event that a particular file is larger than the available disk space, the **FORMAT** Function screen will pop up and allow the formatting of a new target disk. **AUTOFORMAT** also maintains a numbered list of disks, so that each time the **FORMAT** Function screen pops up, the new target volume name is already assigned and numbered and displayed in the **VOL** string gadget of the **FORMAT** Function screen. The only practical purpose for turning **AUTOFORMAT** OFF is when copying files to Ram Disk. The Amiga Ram Disk distributed with release 1.2 of the operating system is a 'resizable' Ram Disk, always showing 0 Disk Blocks free. If autoformatting was turned on during a copy operation to Ram Disk, the **FORMAT** Screen would pop up prior to every file being copied.

– **'?' (Info) gadget:** This gadget invokes the **INFO** screen described above.

– **EXIT:** This gadget closes the copy screen and returns control to the main control panel.

Standard File COPY Tutorial #1 (Whole Hard Drive Backup):

First, make a file display requester active and select a source volume from the **SELECT VOLUME DEVICE** screen (mentioned above). Ensure the **SOURCE** gadget arrow points to this file display requester. Make the other file display requester active with the **SELECT REQUESTER** gadget, and select a **DEVICE NAME** as the target. **DO NOT SELECT A VOLUME NAME IF YOU EXPECT TO DO ANY DISK FORMATTING DURING THE COPY PROCESS.** For the sake of this tutorial, we'll assume that you are copying FROM volume AmigaHD: TO DF1:. (If there was no disk in DF1: when you selected it from the **SELECT VOLUME DEVICE** screen, a system requester will pop up telling you that. Cancel the requester, and the message 'No Disk' will show up in the control panel **STATus** display.) Now you are set to copy FROM the root directory of your hard disk to the root directory of DF1:.

Select the **COPY** Function. Note the Copy screen control settings. For now, we will keep **WARN** ON, **AUTOFORMAT** ON and **DIRS** set to **ALL**. Note the **SOuRCe** and

TARGet displays. They show 'AmigaHD:' for SOuRce and 'DF1:' for TARGet. Note the cursor over the asterisk on the PATtern string gadget. As per Appendix B, the asterisk here means 'copy every file'.

You could further qualify the search pattern if you wanted to. We'll leave that for later.

The D/T text entry box is empty by default. As long as it stays empty, file date stamp will not be considered during the directory searches.

To begin the copy process, select the COPY FILES gadget. Now your only job is to keep feeding disks into DF1: when Ultra DOS asks for them. The ENTIRE structure of your hard drive is being created on the floppy disks, including all directories and subdirectories.

Watch the SOuRce and TARGet displays. As Ultra DOS searches directories, the new paths will be displayed, along with the current file being copied and the number of bytes free on the target disk. When Ultra DOS has completed copying, the STATUS display will show 'NO Further Entries'. Select EXIT to return to the Main Control panel.

To recover files or reconstruct the hard drive after a crash, simply reverse the above process, using the hard drive root directory as the target drive, and the archive floppy root directory as the source. Now simply copy each of the archive floppies to the hard drive. Directories will automatically be created, and all files will automatically be properly located in their correct directories.

COPY Tutorial #2 (Using Copy Qualifiers):

Wild card search patterns, Date or Time, and subdirectory depth can be used to qualify exactly what gets copied. Here's the scenario:

Your home checking account is stored on your hard drive in the Home Money subdirectory. Within this subdirectory are the .ck files that represent all the checks you write in a given month. They look like this: August.ck, September.ck, etc. Unfortunately, there are also many other accounting data files and programs in this directory, including 4 subdirectories, each having numerous subdirectories of their own. We only want to backup this year's check data files. Today's date is 10 March 1988. Here is how we would do it.

Perform the initial setup as described earlier, only pre-select the HOME MONEY subdirectory. (This step is not essential, but it will cut down on the search time.) Select the target device and directory of your choice. Select the COPY function. In the PATtern box, enter *.ck and press RETURN (This sets the search pattern for any file ending in '.ck'). In the D/T box, enter the time we want to copy FROM. For this example you would enter 1/Jan/88 then press RETURN. Click once on the DIRS

gadget, which sets directory search/copy depth to 0, meaning 'search no other directories'. Now click on WARN, turning it OFF. Setting this off says to automatically overwrite existing files on the target disk. Select COPY FILES to begin the copy process. When the copy is complete, select EXIT to return to the Control Panel.

D. Deleting Files

1. BATCH DELETE – BATCH DELETE works exactly like BATCH COPY, only files are erased instead of copied. Initial batch selections are made as already described. If BATCH mode is ON, BATCH DELETE is automatically selected when the Delete Function is selected.

BATCH DELETE gadgets:

The BATCH DELETE Gadgets are similar to BATCH COPY. Instead of a WARN feature, BATCH DELETE has an ASK feature that displays every file and asks the question (in the STATUS display) 'Delete This File?' With ASK turned OFF the files are automatically deleted.

SKIP FILE: Gadget used to respond to the ASK question above.

DELETE FILE: Also used to answer the question above.

CANCEL: Gadget terminates the delete process.

At the completion of a BATCH DELETE operation, the Delete screen closes and a system requester pops up asking to cancel BATCH MODE. Normally you would click in the YES box, as the batch selected files are now deleted and no other operations can be done on them.

2. STANDARD DELETE – STANDARD DELETE works very much like standard copy, but time stamped automatic deletion is not supported as is time stamped copying.

Gadgets:

NAME: This text entry box displays a cursor over the asterisk symbol. The asterisk means 'delete every file'. You can type in a specific file name or any valid wild card pattern.

PATH: This gadget displays the same path as was displayed in the active file display requesters PATH box. You may click in the box and enter any valid path you choose.

ASK (default ON): Serves the same purpose as the ASK option mentioned in BATCH DELETE (above).

DELETE FILES: Begins the search/delete operation. Also used to answer the ASK question (Means YES, delete the displayed file).

SKIP FILE: Answers the ASK question (Means NO, don't delete file).

FILE DISPLAY: Shows the file currently being deleted, or being considered for deletion if ASK is ON.

BYTES FREE: Shows the number of Bytes Free on the target disk.

EXIT: Aborts delete operation in progress and returns control to the Control Panel.

E. MAKE DIR – This function allows the creation of a directory.

Selecting the MakeDir Function will pop up the MAKE NEW DIRECTORY Screen that has the following gadgets.

NAME: Text box for entering any valid AmigaDOS(tm) directory name. Pressing RETURN after entering text in this box will create the new Directory.

PATH: Displays the path, as shown in the active file display requester PATH string gadget.

STAT: Displays the directory creation status. Displays either 'Directory Failed' or 'Created Directory OK'.

MAKEDIR: Gadget to create the new directory. Selecting this gadget has the same effect as pressing RETURN in the name box, as mentioned above.

CONTINUE: Selecting this gadget closes the MAKEDIR screen and returns control to the Main Control Panel.

Note: Upon returning control to the control panel, if the new directory was created successfully the active file display requester will automatically enter the new directory. The new directory will be shown in the PATH string gadget of the file display requester.

F. FORMAT – The FORMAT Function invokes the standard AmigaDOS(tm) format command as stored in the SYSTEM directory of the Workbench(tm) and Ultra DOS disk. TheFORMAT command will successfully format either a conventional floppy or a hard drive partition. However, as your hard drive may have special requirements and software to format it, the FORMAT Function is set up to allow you to invoke ANY format command you want, as long as your special format command follows the standard AmigaDOS(tm) Format command template.

Gadgets:

VOL: This is a text entry box where you can enter any legal AmigaDOS(tm) Volume name. A default name is already displayed, and if the FORMAT Function is invoked from the Standard Copy Function AUTOFORMAT feature, the volume name will also be numbered sequentially.

DEV: This is the Device name as displayed in the PATH text box of the active file display requester. Note that circumstances may allow this to be a Volume name or a Device name. The format routine will not work correctly on a volume name. A Device name must be here.

CMD: This gadget displays the full file path to the standard AmigaDOS(tm) Format Command. If your format command is located in a different directory, or you want to use another command to format your disks, enter the full path name.

STAT: This gadget displays the status of the format operation, either failure or success.

Appendix A : Hard Drive Installation

This section presumes that you are familiar with the operation of Ultra DOS Utilities.

Ultra DOS is ideal for installing any kind of software onto a hard drive, so we will use it to install itself.

Select BATCH mode and display the Ultra DOS disk in one of the file display requesters. Set it as the SOURCE disk. Decide where you want to install Ultra DOS, and set that up in the other file display requester as the TARGET Path. Recommended location is the root directory of your system hard disk or partition. For the purposes of demonstration we will presume that you are copying to the root directory of volume 'AmigaHD:'.

Batch select the following files from the Ultra DOS root directory:

```
Ultra DOS Utilities
Ultra DOS Utilities.info
ultra
uduboot
SInt
IntroScreen
```

Click on the COPY function and begin the batch copy. After copying is complete, your startup-sequence file must be edited to make the correct directory assignments. Ultra DOS can handle that with ease as well.

Select the 'S' directory of your startup disk so that the contents are displayed in one of the file requester display areas. Now click on the file called 'startup-sequence'. Select the '?' gadget of the file display requester. The INFO screen will now be displaying information on the 'startup-sequence' file. Click on the EDIT ASCII FILE gadget. The screen editor ED will now be displaying your startup-sequence file. One line must be added to the file.

Add the following line either above the LOADWB command or enter it after any other ASSIGN commands in the file. To open a line at the selected location, press RETURN with the cursor at the leftmost position and over the line you want to open.

Add the following line: Assign Ultra DOS: AmigaHD: (or to wherever you copied Ultra DOS Utilities).

Once you have entered this line, press the 'ESC' key, then the 'X' key to save your changes. This ASSIGN will not take effect until you reboot. To make this assign effective without re-booting, remove the Ultra DOS program disk from it's drive and select the NEWCLI gadget and enter the exact same line at the CLI prompt. Enter ENDCLI <RETURN> to close the CLI.

Appendix B: Wild Card and Date/Time Search Patterns

Wild Card Searches – Ultra DOS Utilities search routines support 2 types of wild cards, the asterisk (*) and the question mark (?).

A. Asterisk – The asterisk is a multiple character wild card with the following uses:

1. If it is used at the BEGINNING of a filename, only the characters FOLLOWING the '*' will be checked for a match as a directory is read.

Example: * will cause a match with every file in directory.

Example: *info would match any file ending in info.

2. If used at the END of a filename, only the characters BEFORE the '*' will be checked for a match as the directory is read.

Example: Test* would match any file beginning with Test.

As before, it also matches a file whose name was only Test.

3. Only one asterisk is allowed per pattern, meaning usage such as this will not work:

NOT ALLOWED: *Test* or In*fo*. Ultra DOS would react and conduct searches based on the first asterisk in the name.

B. Question Mark – The question mark is a single character wild card with the following uses:

Question mark can be used anywhere within a filename, as many times as desired.

Example: Tes?ing would provide a match on any seven character filename beginning with Tes and ending in ing.

Example: ???? would match any 4 character filename in the directory being searched.

C. Using both wildcards in the same filename. Use of both wildcards in a single filename is allowed, but the question mark(s) must fall within the normal text area.

Example: *Tes?ing would provide a match for any file ending in a 7 character string, that itself begins with Tes and ends with ing.

Example: ?est* would match any file beginning with a 4 character string, of which the 2nd through 4th characters were est.

Using both wild cards together can also be used to search based on file size.

Example: ????* would provide a match on any filename of at least 4 characters in length.

D. Date/Time related searches – AmigaDOS(tm) maintains a system that is 'stamped' onto volumes, directories, and files whenever any of these are created, written to or updated. Ultra DOS uses these times to locate and copy files.

The Standard Copy Function supports date and time based operations. The D/T text entry box of the Standard Copy screen is the input method for entering dates or times.

To enter a date or time, use the conventions listed below and press RETURN. If your date or time is acceptable to Ultra DOS, the STATus display will show 'Date Set'. If not, the STATus display will show 'Invalid Date'. To clear a date or time entry, erase the contents of the D/T box and press RETURN.

TIME: Any time entered as a comparison to the current system time. Entering '5 H' means 5 hours from the current system time. This is telling Ultra DOS to search a particular path, and copy any files that were time stamped (meaning created, or updated) WITHIN THE LAST 5 HOURS. The following forms are acceptable time entries.

1. x M – (where 'x' is the number of minutes)
2. x H – (where 'x' is the number of hours)
3. x D – (where 'x' is the number of days)

Example: A search entry entered in the D/T text box of '5 D' could be used at the end of a work week to backup only those files modified during the week.

Example: A search entry of '30 m' could be used to make a safety backup from Ram Disk of only those files modified during the last 30 minutes.

DATE: Single or multiple dates can be entered in the D/T text entry box. If a single date is entered, it is used in comparison with the current system date. Two dates may be entered separated by the word 'To', in which case Ultra DOS would search for files created or modified between the two dates.

All dates **MUST** be entered in the following format:

day/month/year, using 3 digit month description, all separated by a slash '/'.

Example: 1/Jan/87 – Means to copy every file created between 1 January 87 and now (current system date).

Example: 22/sep/87 to 15/nov/87 – Means to copy all files with time stamps between these dates.

Appendix C: Multitasking and Copy Speed.

Multitasking:

Ultra DOS is designed to operate effectively in the 'background', but your Hard Drive driver software may not be. If you have noticed a slowdown in pointer movements or similar operations during hard drive activity, your driver software may be 'monopolizing' the CPU to achieve it's speed, in which case lengthy hard drive activity during backups may make successful multitasking difficult. A partial cure is to allocate a large copy buffer. This will limit hard drive activity to some extent.

Copy Speed:

Many factors play a part in the actual time it takes to copy files from one location to another. Here are a list of some of the variables:

1. Cache buffer allocation for the floppy disk drives.
2. Ultra DOS Copy Buffer size.
3. File size. This is probably the largest single factor in copy times to a floppy disk. Most of the drive's time spent during a copy operation is in positioning the read/write head on the disk surface. If you have a large number of small files, a lot of time is spent transferring a small amount of data. Conversely, large files will transfer quickly because of limited head movement required.

Making faster backups:

A. Set the Ultra DOS copy buffer as large as your usage and system configuration allows.

B. Allocate adequate cache buffers to your floppy drives. This is typically done in the 's/startup-sequence' file with a line, entered at the beginning of the file, similar to the below example:

Addbuffers dF0: 25

Addbuffers dF1: 25

Under the current release of the operating system (1.2), each buffer represents 512 bytes of CHIP memory. The above example would use 25,600 bytes of CHIP memory. More than 25 buffers seems to have little effect on drive speed.

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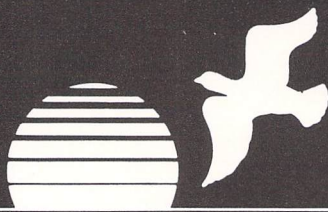
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- Auto configures to multi-hard drive systems or multi-partitions
- Supports up to 8.5 meg of memory
- Uses a unique double buffered file copy routine for lightning fast copies
- Full Intuition interface for maximum ease of use
- Backs up files
 - 1) by creation date
 - 2) with 'Point and click' selection (name, directory, drive)
 - 3) using 'wild card' search patterns
- Fully supports Multi-tasking, does not monopolize CPU to achieve its speed. Designed to operate in the 'background'
- Compatible with any Hard drive that follows conventional AmigaDOS file protocol
- 512K Amiga required
- Hard Drive NOT REQUIRED. Ultra DOS Utilities Module I works equally well with dual floppy drives!